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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,509	06/27/2001	Mikko Puuskari	P 281472 2990408US/VK/KP	8780

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EXAMINER	
JAGANNATHAN, MELANIE	
ART UNIT	**PAPER NUMBER**
2666	

DATE MAILED: 02/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/891,509	PUUSKARI ET AL.	
	Examiner	Art Unit	
	Melanie Jagannathan	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-14 and 16-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-14 and 16-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

- Examiner has considered Amendment after Final mailed 12/7/2005.
- Claims 1, 3-14, 16-23 are pending.
- Upon further detailed examination, Examiner has discovered a 35 U.S.C. 101 problem with claim 20 regarding a digital configuration signal. As this was not addressed in earlier office action, the finality is withdrawn and a new Non-Final is submitted.

Claim Objections

1. Claims 1, 7, 8, 14, 16, 17, 19 are objected to because of the following informalities: the recitation of "the first plurality" and "the second plurality" should be changed to "the first plurality of data flows" and "the second plurality of data flows" respectively. Examiner would appreciate Applicant making changes to all the occurrences of this informality in the claims listed above. Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 20 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed subject matter of a digital configuration signal embodied in a carrier wave is not statutory. Examiner kindly

requests Applicants to direct their attention to pages 55 and 57 of the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility. Under no circumstances are signals deemed statutory subject matter. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3-14, 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Forslow US 6,608,832.

Regarding claims 1, 6, 18, 22, the claimed method comprising sending data packets in a first plurality of data flows in the first communication subsystem and the claimed mapping the first plurality of data flows to a second plurality of data flows in second communication subsystem is disclosed by GGSN (Figure 9, element 116) with mapper for QoS mapping function per individual application flows, plural application flows communicated between an external network entity like ISP and mobile station. See column 3, lines 66-67, column 4, line 4, column 9, lines 66-67, column 10, lines 1-2, lines 40-45, column 15, lines 10-13. The claimed establishing at least one filter for controlling the mapping, associating the at least one filter with a data flow within the second plurality, mapping flow on the basis of filter and configuring filter from second network element in transparent message (claim 6) is disclosed by mobile station initiating packet data protocol context activation to register, HLR stores a PDP context for each mobile subscriber in corresponding subscription records including subscribed quality of service profiles/parameters, Msid such as IMSI. One or more application flows such as video application flows, audio application flows or conferencing application flows can be established for a single PDP context. The mapper (element 128) in GGSN performs link layer selection and QoS mapping functions per individual application flows. See column 3, lines 66-67, column 4, lines 1-8, 61-67, column 5, lines 11-36, column 9, lines 1-25, 66-67, column 11, lines 56-62, column 15, lines 56-65.

Additionally, regarding claims 1, 16, the claimed wherein at least one of the data flows is bidirectional having a first direction from first plurality of data flows to second plurality of data flows and having a second direction which is inverse to first direction is disclosed by after PDP context activation for mobile station, an IP bearer between mobile host and GGSN, established in the PDP context, is extended from GGSN to ISP so data packets can be routed back and forth between mobile station and end systems at ISP. See column 9, lines 25-37.

Forslow discloses differentiated services approach, where each packet header is analyzed to determine whether header specifies one of several general classes of service for transport. See column 18, lines 28-32. Forslow discloses the PDP context includes quality of service profiles/parameters for the application flows. See column 9, lines 16-17.

However, Forslow does not disclose the claimed at least one filter is modified on the basis of user data packets sent. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify Forslow to modify quality of service parameters in PDP context for flow based on analysis of packet headers. One of ordinary skill in the art would be motivated to do this for flexible implementation of quality of service.

Regarding claims 3, 9, the claimed configuring the filter in a packet radio network employing packet radio protocol context activation is disclosed by mobile station initiating packet data protocol context activation to register, HLR stores a PDP context for each mobile subscriber in corresponding subscription records

including subscribed quality of service profiles/parameters, Msid such as IMSI. One or more application flows such as video application flows, audio application flows or conferencing application flows can be established for a single PDP context. Examiner contends Forslow discloses that in order for a mobile station to communicate with an Internet service provider, the mobile station must establish communications with the mobile communications network. The mobile station initiates a packet data protocol context activation to register with the mobile communications system and begin a data session. The HLR stores a PDP context activation for each mobile subscriber including QoS profiles/parameters, IMSI etc and when a mobile station attaches to the GPRS network, the mobile station's subscription record is retrieved from the HLR. Examiner interprets this as teaching the idea of a filter (HLR) configured from a second network element (all mobile stations PDP context's are stored). See column 9, lines 1-8, lines 11-25.

Regarding claims 4-5, 10-12, the claimed configuring at least two filters in a dedicated message, in one PDP context activation and identifying each filter with a distinct identifier is disclosed by one or more application flows such as video application flows, audio application flows or conferencing application flows can be established for a single PDP context configured with a MSid such as IMSI etc. Additionally, quality of service for each individual application flow can be established. See column 3, lines 66-67, column 4, lines 1-3, column 5, lines 14-16, lines 22-33.

Regarding claims 7,8, the claimed IP network is disclosed by IP data network (Figure 2, element 56) and claimed allocating one IP address which is shared by all data flows within the second plurality and claimed allocating a separate IP address to each data flow is disclosed by one or more application flows can be established for a single PDP context.

Regarding claims 13-14, the claimed performing mapping on the basis of a filter to data flows conveying real-time information is disclosed by real time application like telephony requiring a guaranteed, low delay service with some applications having plural application flows with quality of service defined for each individual application flow. See column 3, lines 35-67, column 4, lines 1-8, 61-67, column 5, lines 1-33, column 9, lines 1-37, 66-67, column 10, lines 1-8, column 11,lines 56-62. The claimed default parameters is disclosed by individual application flows are associated with a quality of service class but a predefined new service class may be associated with an individual application flow and all of the packets within that flow are processed according to that quality of service class. See column 12, lines 35-55.

Regarding claim 17, the claimed at least one data flow tunneled over and at least two data flows within the second plurality have mutually different quality of service characteristics is disclosed by each application flow includes a corresponding stream of data and in order for mobile station to communicate with ISP it establishes a packet-switched tunnel. Forslow also discloses each PDP context initiated by mobile station may have plural application flows with quality

of service parameters for each flow. See column 5, lines 10-21, column 9, lines 1-8, lines 11-25, lines 54-65, column 11, lines 1-4.

Regarding claims 19, 23, the claimed first network element for routing data packets, being adapted to receive data packets in a first plurality of data flows is disclosed by GGSN receiving application flows from mobile station (Figure 9, element 102). See column 14, lines 51-67, column 15, lines 1-9. The claimed map the first plurality of second plurality of flows in second subsystem is disclosed by GGSN (element 116) including mapper (element 128) performing link layer selection and QoS mapping functions per individual application flows. See column 14, lines 26-62, column 15, lines 10-14, lines 56-65. The claimed establish at least one filter for controlling mapping, associate filter with data flow within the second plurality and map at least one data flow on basis of filter is disclosed by mobile application flows having a quality of service associated with it recognized on the IP layer. Individual application flows may specify and reserve beforehand IP level of quality of service desired (QoS Map Routine, Figure 8, block 70). See column 11, lines 56-67, column 12, lines 35-46. The claimed receive a mobile station generated signal for configuring the filter, configure filter on basis of signal is disclosed by resource reservation approach, where mobile station can request one or more quality of service parameters for one or more individual application flows. The requested parameters for each application flow are mapped to bearer parameters of selected bearer. See column 10, lines 2-18.

Additionally, regarding claim 19, the claimed wherein at least one of the data flows is bidirectional having a first direction from first plurality of data flows to second plurality of data flows and having a second direction which is inverse to first direction is disclosed by after PDP context activation for mobile station, an IP bearer between mobile host and GGSN, established in the PDP context, is extended from GGSN to ISP so data packets can be routed back and forth between mobile station and end systems at ISP. See column 9, lines 25-37.

Forslow discloses differentiated services approach, where each packet header is analyzed to determine whether header specifies one of several general classes of service for transport. See column 18, lines 28-32. Forslow discloses the PDP context includes quality of service profiles/parameters for the application flows. See column 9, lines 16-17.

However, Forslow does not disclose the claimed at least one filter is modified on the basis of user data packets sent. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify Forslow to modify quality of service parameters in PDP context for flow based on analysis of packet headers. One of ordinary skill in the art would be motivated to do this for flexible implementation of quality of service.

Regarding claims 20-21, the claimed mobile station for a packet radio network, operable to send a digital configuration signal for creating or modifying a packet data protocol context in a support node for interfacing an external communication subsystem with packet radio network is disclosed by mobile station initiating packet data protocol context activation to register, HLR stores a

PDP context for each mobile subscriber in corresponding subscription records including subscribed quality of service profiles/parameters, Msid such as IMSI. One or more application flows such as video application flows, audio application flows or conferencing application flows can be established for a single PDP context. See column 9, lines 11-19. Forslow discloses that in order for a mobile station to communicate with an external Internet service provider, the mobile station must establish communications with the mobile communications network. The mobile station initiates a packet data protocol context activation to register with the mobile communications system to begin a data session. See column 9, lines 2-8.

The claimed wherein at least one of the data flows is bidirectional having a first direction from first plurality of data flows to second plurality of data flows and having a second direction which is inverse to first direction is disclosed by after PDP context activation for mobile station, an IP bearer between mobile host and GGSN, established in the PDP context, is extended from GGSN to ISP so data packets can be routed back and forth between mobile station and end systems at ISP. See column 9, lines 25-37.

Forslow discloses differentiated services approach, where each packet header is analyzed to determine whether header specifies one of several general classes of service for transport. See column 18, lines 28-32. Forslow discloses the PDP context includes quality of service profiles/parameters for the application flows. See column 9, lines 16-17.

However, Forslow does not disclose the claimed at least one filter is modified on the basis of user data packets sent. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify Forslow to modify quality of service parameters in PDP context for flow based on analysis of packet headers. One of ordinary skill in the art would be motivated to do this for flexible implementation of quality of service.

Response to Arguments

6. Applicant's arguments filed 12/07/2005 have been fully considered but they are moot in view of new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 571-272-3163. The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
1/30/06

FRANK DUONG
PRIMARY EXAMINER